

- Dual channel for stereo applications
- Balanced inputs and outputs
- Connects in-line for easy test signal insertion
- Quick identification of insertion point with voice ID
- Short Duration Audio Test Sequence for rapid automatic checkout of audio lines
- Single button selection of line-up tone
- Manual mode allows selection of frequency and amplitude

The ASG 100 Audio Signal Generator supplies test tone sequences used to perform automated measurements with the VM 700A Option 40 Audio Measurement Set. In approximately 30 seconds, these two products can totally characterize the audio performance of studios, STLs, transmitters and satellite uplinks. Its small size and quick line-up tone selection make it well suited for verifying microwave links from EFP/ENG vans.

The ASG 100 provides tone sequences for testing to ANSI T1.502-1988, EIA/TIA-250-C or CCITT 0.33 standards. Each sequence begins with a one second FSK signal unique to that sequence. The FSK contains a programmable four digit ID, indicating the source of the test signals. It also communicates to the VM 700A Option 40 the appropriate stored measurement program to use and marks the beginning of the test tones. The remainder of the sequence consists of a number of test tones at defined levels and frequencies. Each tone is typically one second in duration.

Audio measurement results obtained via automatic monitoring can be included in the VM 700A's Auto mode

ASG 100 AUDIO SIGNAL GENERATOR

\$1800



ASG 100 Audio Signal Generator.

video measurements display, along with the time, date and four digit ID of the last sequence received. The VM 700A Option 40 provides timed reports and logging of measurement results falling outside user defined limits.

Installing the ASG 100 in-line near the program source eliminates the need to change cables every time you perform a test. A fail-safe feature prevents interruption of audio service due to loss of power or instrument malfunction. The tone sequence can be initiated by front panel controls or rear panel contact closure. After insertion of a tone sequence is completed, the ASG 100 returns to a bypass mode. The ASG 100 also has the capability to store four seconds of voice in non-volatile memory with convenient front panel microphone and controls. To alert personnel that a test tone

sequence is about to be inserted, the stored voice message may be inserted prior to the sequence. To aid in remote setups, the ASG 100 can "loop" on the stored message.

Selecting the Line-Up function on the ASG 100 automatically brings up a user defined signal for setting operating levels of the audio source point.

The Silence function is useful for facilitating system noise measurements or quickly removing any signal that is over-driving the audio line.

The Manual mode provides a means of setting the output frequency or amplitude to any value within the instrument's range. In this mode of operation the ASG 100 acts like a conventional audio tone generator.

Measurement Sequence for Stereophonic Pairs, CCITT Recommendation 0.33

| Time Interval | Channel A Sending unit | | Channel B Sending unit | | Program number: 01 |
|-----------------|---------------------------|--------------|---------------------------|--------------|-------------------------------------|
| Seconds | Frequency (Hz) | Level (dBm0) | Frequency (Hz) | Level (dBm0) | Measuring function |
| 1 | 1650/1850 | -12 | — | — | Start/source/program identification |
| 1 | 1,020 | 0 | 1,020 | 0 | Received level |
| 1 | 1,020 | -12 | 1,020 | -12 | Frequency response |
| 1 | 40 | -12 | 40 | -12 | interchannel |
| 1 | 80 | -12 | 80 | -12 | Gain and phase |
| 1 | 200 | -12 | 200 | -12 | |
| 1 | 500 | -12 | 500 | -12 | |
| 1 | 820 | -12 | 820 | -12 | |
| 1 | 2,000 | -12 | 2,000 | -12 | |
| 1 | 3,000 | -12 | 3,000 | -12 | |
| 1 | 5,000 | -12 | 5,000 | -12 | |
| 1 | 6,300 | -12 | 6,300 | -12 | |
| 1 | 9,500 | -12 | 9,500 | -12 | |
| 1 | 11,500 | -12 | 11,500 | -12 | |
| 1 | 13,500 | -12 | 13,500 | -12 | |
| 1 | 15,000 | -12 | 15,000 | -12 | |
| 1 | 1,020 | +9 | 1,020 | +9 | |
| 1 ^{a)} | — | — | — | — | Total harmonic distortion |
| 1 | 60 | +9 | 60 | +9 | |
| 1 | 2,040 | -12 | — | — | Crosstalk and circuit transposition |
| 1 | — | — | 2,040 | -12 | |
| 1 | 800 | +6 | 800 | +6 | |
| 1 | 800 | -6 | 800 | -6 | |
| 1 | 800 | +6 | 800 | +6 | |
| 8 | — | — | — | — | Signal-to-noise ratio |

^{a)} Waiting interval.

SPECIFICATIONS

Frequency Related

| | |
|------------|-----------------|
| Range | 10 Hz to 20 kHz |
| Resolution | 1 Hz |
| Accuracy | $\pm 0.1\%$ |
| | |

Amplitude Related

| | |
|------------|--|
| Range | -90 dBu to +24 dBu (24 μ V to 12.3 V) |
| Resolution | 0.1 dB |
| Accuracy | ± 0.2 dB at 1 kHz |
| Flatness | ± 0.2 dB 20 Hz to 20 kHz |

Distortion

THD+N
 $<0.01\%$ ($<0.005\%$ at full output)
20 Hz to 20 kHz measured over
an 80 kHz bandwidth

Other

| | |
|--------------------------------------|--|
| Signal-to-Noise Ratio | >80 dB at 0 dBu output level |
| Input Connectors | Two XLR; balanced; looped through to output unless generator is in INSERT mode |
| Output Connectors | Two XLR, balanced |
| Output Impedance | 10 ohms, 600 ohms, or user defined; balanced |
| Level Difference Between Channels | ≤ 0.2 dB |

Phase Difference Between
Channels
 ≤ 1 degree, 10 Hz to 20 kHz

Power Source

Voltage Range
90 to 260 Vac
Power Consumption
20 W typical

Physical Characteristics

Dimensions
Width—8.1 in. (206 mm)
Height—1.7 in. (43 mm)
Length—18.0 in. (458 mm)
Net Weight
3.25 lbs (1.48 kg)

Environmental

Temperature
Operating
0°C to +50°C
Non-operating
-40°C to +65°C

ORDERING INFORMATION

ASG 100 Audio Signal
Generator

For further information, contact:

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